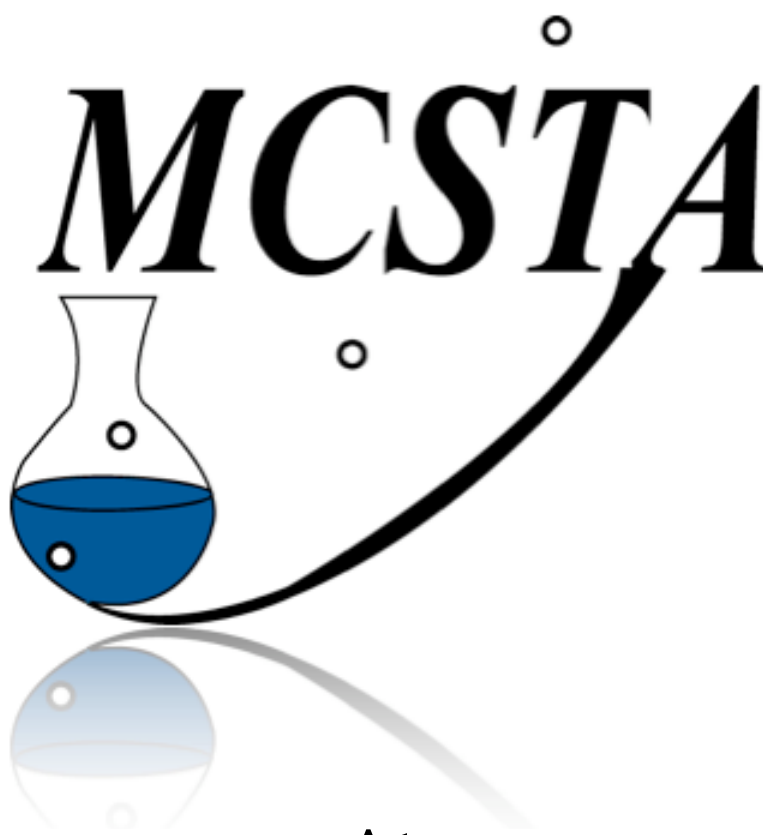


# MCSTA 48<sup>TH</sup> ANNUAL MINI-CONVENTION



At  
Upper Merion Area High School  
King of Prussia PA

October 25, 2007



*Inspiring Excellence*

## *Upper Merion Area High School*

435 Crossfield Road • King of Prussia, PA • 610-205-3000 • Fax 610-205-3993 • [www.umasd.org](http://www.umasd.org)

**Jonathan Bauer**  
Principal

**Michael Fabrizio**  
Assistant Principal

**JoAnne Fox**  
Assistant Principal

**Carole Hoy**  
Assistant Principal

October 25, 2007

Welcome Teachers of Science,

We at Upper Merion Area High School are honored to host the 48<sup>th</sup> annual Montgomery County Science Teachers Association Mini-Convention.

Science teachers continue to be at the forefront of preparing our student for the changing demands of the 21<sup>st</sup> century. I'm sure your workshops this evening will help further collaboration on meeting our students' needs. Professional collaboration of this type is an important part of our profession and I commend your association for it's long-term commitment to the sharing of ideas and information.

So please enjoy your evening and make yourself comfortable in our facility.

Sincerely,

**Jonathan Bauer**  
Principal  
Upper Merion Area HS

**The 2007 Montgomery County Science Teachers' Association  
48<sup>th</sup> Annual Mini-Convention**

Program Schedule

3:30 – 4:15	Exhibit Time
4:20 – 5:20	Session One
5:20 – 5:50	Exhibit Break
5:50 – 6:50	Session Two
6:50 -	Dinner, Awards, Door Prizes

Session	Room	Description
<b>1</b>		
A	E101	<b>UM'S SCIENCE AND TECHNOLOGY COURSE: AN ONLINE COLLABORATION</b> presented by Scott A. Cox, Upper Merion Area High School As we worked to spiral our curriculum in accord with state standards, we incorporated many of the anchors previously neglected at the high school level. Rather than gathering them together in a course of miscellaneous topics, we integrated each through the lens of Science and Technology to create a unique and interesting course for all types of students. In addition to sharing details about this course, the presentation will show how our site at wikispaces.com has served as an invaluable tool for the interdisciplinary collaboration that such a course demands, and give participants an opportunity to set up such a space for use in their departments or classrooms. Workshop; High School; General; STS
B	E115	<b>DNA FROM STRAWBERRIES</b> presented by Sister Anne Donigan, Science Chair, Gwynedd Mercy College A simple but effective method to extract DNA from strawberries in a short time using readily available materials. Demo; Jr/Upper Elem/High School; Biology
C	E117	<b>THE DISCOVERY BOX</b> presented by Wade Farrior; Barbara McHale, Anna FeldmanRosen from Eastern PA Branch-American Society for Microbiology The Discovery Box and now it can be used as a teaching tool. Workshop/Demo; General; Biology
D	E100	<b>TAKING THE MASK OFF INQUIRY</b> presented by Dick Close, Director of Outreach and Barb Lorenzon, Director of Education, Delaware Valley Science Fair Exactly what is inquiry? This workshop will be hands-on, mind-on opportunity for you to experience it and to take back to your classroom tomorrow. Workshop
E	E109	<b>CHEMISTRY DEMOS - COLOR!!</b> Presented by Mary Cutillo, Chemistry Teacher at Perkiomen Valley High School High School
F	E100	<b>COSMIC TIMES - 1919 EDITION</b> presented by Sandra M. Knotts, Physics Teacher, Perkiomen Valley High School. NASA's astronomy and physics project looking at cosmology through a series of newspapers. Lessons that accompany the posters range from middle school to high school and address topics on earth science and physics as well as some interdisciplinary topics. Demo; Jr/ Upper Middle/High School; E&S; Physics; Space

- G E102 **THE NATURE OF SCIENCE - WHAT SCIENTISTS DO** presented by William Bleam, Don McKinney, Education Consultants, Chemical Heritage Foundation  
Are you still teaching students the same old "scientific method?" Come to this hands-on workshop that will prepare you to teach the processes used by scientists. Leave the workshop ready to teach your students the excitement of actually doing science. Teach students the nature of science using biographies of real scientists as your guide. Workshop; Jr/Middle; Chemistry/General
- H E113 **GEL ANALYSIS** presented by Ronald Faust, Mobile Biology Educator – Science and Motion  
Scientists have found that some people appear immune to AIDS. Put your students on the cutting edge of genetic research in a quest to find the genetic reason for this immunity.

#### **EXHIBIT BREAK 5:20-5:50**

<b>Session</b>	<b>Room</b>	<b>Description</b>
<b>2</b>		
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D	E100	<b>MONTGOMERY COUNTY SCIENCE RESEARCH COMPETITION</b> presented by Dick Close, Director, Montgomery County Science Research Competition How do I get involved? What are the rules? Come and find out! During this session we will review the rules and regulations we follow for the MCSRC held in March at MCCC. It is required for a school to attend at least one of the Rules meetings for their school to be eligible to compete. The forms needed to be completed, the timeline for the competition and the online registration will be discussed. Come and see how you can have your students involved in this challenging activity.

- E E109 **POGIL** (Process Oriented Guide Inquiry Learning) presented by Mary Cutillo, Chemistry Teacher at Perkiomen Valley High School An innovative, studentcentered teaching strategy for science and chemistry.
- F E111 **THE BUCKET BRIGADE - AIR QUALITY MONITORING PROGRAM** presented by Zareef Ahmed, Program Organizer for Clean Water Action Workshop and demonstration which will show you how to make an inexpensive air monitoring sampler from a 5 gallon bucket. Communities participate in fighting for their health rights by taking simple, yet effective samples of the air in their communities. Workshop/Demo; All Levels; Chemistry/E&S/Environmental
- G E102 **"UNITEDSTREAMING" 24/7 ACCESS TO SCIENCE VIDEOS** presented by Maria John~ ProjectAssodat~ MCIU23  
All public school teachers in Montgomery County have free access to "unitedstreaming" through their membership in MCIUjTIS services. Learn to navigate the website! select resources and differentiate material for all levels.
- H E103 **STEP ELEMENTARY SCHOOL SCIENCE ASSEMBLY PROGRAM** presented by Science Technology Education Partnership (STEP)  
STEP educators have been presenting elementary school science assembly programs in the Delaware Valley region for the past five years. Our complete 55-minute assembly program! which includes a wide variety of science demos! will be presented during this session. Workshop/Demo; Primary/Upper Elem; Elementary
- I E107 **ADDRESSING IPM IN THE CHEMISTRY CLASSROOM: A PROJECT APPROACH** presented by Lynda Newhart, Upper Merion area High School  
Brief (one to five sentences) topic description: State standards require that integrated pest management be included in the science classroom. This workshop will demonstrate how this can be accomplished in chemistry via an inquiry based project. Workshop will include an introduction to IPM, activities to support the project and technology integration.
- J E113 **SPECTROPHOTOMETRY OF MR. LEIGH'S PLASMA SAMPLE** present by Jocelyn Erikson, Chemistry Mobile Educator, Ursinus College, Science in Motion  
A forensics approach to Beer's Law.

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“Science is built up of facts, as a house is with stones. But a collection of facts is no more a science than a heap of stones is a house.” – Henri Poincare

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Keep it Touch with MCSTA - Visit [www.mcsta.org](http://www.mcsta.org)

For mini-convention program and presentation information – Visit <http://mcsta.wikispaces.com>

### AT A GLANCE PROGRAM

Room	Session One	Session Two
E100	E. TAKING THE MASK OFF INQUIRY	D. MONTGOMERY COUNTY SCIENCE RESEARCH COMPETITION
E101	A. UM'S SCIENCE AND TECHNOLOGY COURSE: AN ONLINE COLLABORATION	A. UM'S SCIENCE AND TECHNOLOGY COURSE: AN ONLINE COLLABORATION
E102	G. THE NATURE OF SCIENCE - WHAT SCIENTISTS DO	G. "UNITEDSTREAMING" 24/7 ACCESS TO SCIENCE VIDEOS
E103		H. STEP ELEMENTARY SCHOOL SCIENCE ASSEMBLY PROGRAM
E107		I. ADDRESSING IPM IN THE CHEMISTRY CLASSROOM: A PROJECT APPROACH
E109	F. CHEMISTRY DEMOS - COLOR!!	E. POGIL
E111		F. THE BUCKET BRIGADE - AIR QUALITY MONITORING PROGRAM
E113	H. GEL ANALYSIS	J. SPECTROPHOTOMETRY OF MR. LEIGH'S PLASMA SAMPLE
E115	B. DNA FROM STRAWBERRIES	B. DNA FROM STRAWBERRIES
E117	C. THE DISCOVERY BOX	C. THE DISCOVERY BOX

### SCIENCE DEPARTMENT MAP

